

WHAT IS CLAIMED IS:

1 1. A printing compound suitable for recording the unique surface characteristics of an object
such as a person's fingerprint area, a tire tread or shoe sole on a porous medium such as paper
comprising an emulsion of:

 a composition capable of delineating the surface characteristics when
5 transferred from the object's surface to the porous medium by itself or in conjunction
with a separate reagent; and

 a sufficient amount of a water dispersable nonionic surfactant to render the
composition substantially soluble in water whereby the composition may be readily
removed from the object through the use of water after the surface characteristics
10 thereon have been recorded.

1 2. The printing compound of claim 1 wherein the nonionic surfactant contains an ethoxylated
oil.

1 3. The printing compound of claim 2 wherein the ethoxylated oil is hydrogenated.

1 4. The printing compound of claim 3 wherein the oil is a vegetable oil.

1 5. The printing compound of claim 4 wherein the vegetable oil is castor oil.

1 6. The printing compound of claim 2 wherein the ethoxylated oil is a PEG-40 castor oil
ester.

1 7. The printing compound of claim 3 wherein the hydrogenated oil is a PEG-40 ester.

1 8. The printing compound of claim 1 wherein the nonionic surfactant is GRH40.

 9. The printing compound of claim 1 wherein the nonionic surfactant is alkoxylated oil.

1 10. The printing compound of claim 1 wherein the composition is printer's ink.

1 11. The printing compound of claim 1 wherein the composition is an inkless reagent as described in the '415 patent.

1 12. The printing compound of claim 1 wherein the composition is an inkless fingerprint compound as described in the '750 patent.

1 13. The printing compound of claim 1 wherein the composition is a dye based ink as described in the '556 patent.

1 14. The printing compound of claim 1 wherein the nonionic surfactant is selected from one or more of the group consisting of ethoxylated polyethylene/polypropylene glycols, ethoxylated sorbitan esters, PEG fatty acid esters, ethoxylated glycerin esters, ethoxylated fatty amines, ethoxylated fatty acids, alkoxylated castor oils, ethoxylated alcohols, block ethoxylates/polyoxylates, 5 alkoxylated alcohols, alkoxylated block polymers, ethoxylated alky phenols, ethoxylated castor glycerides, ethoxylated tall oils and rosin acids, ethoxylated sorbitol fatty acid esters, POE fatty acid ethers, ethoxylated lanolin, ethoxylated hydrogenated lanolin, alkanolamines, fatty alcohol-ethylene oxide condensation products (alkylated oils).

1 15. A fingerprint ink compound comprising an emulsion of:

printer's ink; and

a sufficient amount of a water dispersable nonionic surfactant to render the printer's ink substantially soluble in water without adversely affecting the ability of 5 the printer's ink to delineate the surface characteristics when transferred to the porous medium.

1 16. The fingerprint ink of claim 15 wherein the surfactant contains an ethoxylated oil.

1 17. The printing compound of claim 16 wherein the ethoxylated oil is hydrogenated.

- 1 18. The printing compound of claim 17 wherein the oil is a vegetable oil.
- 1 19. The printing compound of claim 18 wherein the vegetable oil is castor oil.
- 1 20. The printing compound of claim 16 wherein the ethoxylated oil is a PEG-40 castor oil ester.
- 1 21. The printing compound of claim 15 wherein the hydrogenated oil is a PEG-40 ester.
- 1 22. The printing compound of claim 15 wherein the nonionic surfactant is GRH40.
- 1 23. The printing compound of claim 15 wherein the nonionic surfactant is selected from one or more of the group consisting of ethoxylated polyethylene/propylene glycols, ethoxylated sorbitan esters, PEG fatty acid esters, ethoxylated glycerin esters, ethoxylated fatty amines, ethoxylated fatty acids, alkoxyated castor oils, ethoxylated alcohols, block ethoxylates/polyoxylates, alkoxyated alcohols, alkoxyated block polymers, ethoxylated alky phenols, ethoxylated castor glycerides, ethoxylated tall oils and rosin acids, ethoxylated sorbitol fatty acid esters, POE fatty acid ethers, ethoxylated lanolin, ethoxylated hydrogenated lanolin, alkanolamines, fatty alcohol-ethylene oxide condensation products (alkylated oils).
- 1 24. The printing compound of claim 16 wherein ethoxylated oil has a water solubility of about 10% or more.
- 1 25. A method of taking an inked impression of the unique surface characteristics of an object comprising:
- 5 a) providing an emulsion of a composition capable of delineating such surface characteristics when transferred from the object's surface to a porous medium by itself or in conjunction with a separate reagent and a sufficient amount of a water dispersable nonionic surfactant to render the composition substantially soluble in

water without substantially affecting the ability of the composition to delineate the surface characteristics when transferred to the porous medium;

b) coating the desired surface of the object with the emulsion; and

10 c) pressing the desired surface of the object against a porous recording medium.

1 26. The method of claim 25 further including the step of applying water to the object's surface to remove the emulsion therefrom.

1 27. The method of claim 25 wherein the object is a tire, the composition is printer's ink, the coating step comprises using a hand applicator to apply the emulsion to the tread surface of the tire and the pressing step comprises rolling the tire over the recording medium.

1 28. The method of claim 27 wherein the recording medium is paper.

1 29. The method of claim 25 wherein the object is the bottom of a shoe, the composition is printer's ink, the coating step comprises using a hand applicator to apply the emulsion to the bottom of the shoe and the pressing step comprises forcing the bottom of the shoe against the recording medium.

1 30. The method of claim 29 wherein the recording medium is paper.